

Mark scheme

End of Unit assessments are 30 marks, so you should allow 35 minutes.

The following marks are awarded for each question.


B	Unconditional accuracy mark
M	Method mark – the correct method must be shown but there may be an arithmetic error; the sight of the value given in brackets implies the award of the method mark
A	Accuracy mark – unless the question specifies that working must be shown then the sight of the correct answer implies the award of full marks (unless the answer clearly comes from incorrect working)
C	Communication mark
P	Process mark to show correct process for problem solving. Any other process of a similar standard to achieve an accurate result is acceptable to achieve this mark
ft	Incorrect values may be followed through from one step to the next provided that the correct method is seen in each step and the only errors are arithmetic. This is shown in mark schemes by putting a number in inverted commas
oe	Or equivalent method or answer
cao	Correct answer only

Non-calculator			
Q	Answer	Mark	Comment
1 a	$11y$	B1	Accept $y \times 11$
1b	Multiply (by) 4 or $\times 4$	B1	accept 'times (by) 4' or ' $\times 4$ '
1c	One pair of inverse operations, e.g. $+10$ and -10 , or $\times 3$ and $\div 3$	B1	Or any correct pair of non-inverse e.g. $\times 2$ and -7
1d	A pair of operations, e.g. $+6$ and $+2$, or $+9$ and -1	B1	
2a	$3p$	B1	cao
2b	$-3a + 4b - 4$	B1	For 2 correct terms
		B1	cao
3a	$12x + 8$	B1	cao
3b	either ' $10d - 15$ ' or ' $3d + 21$ ' seen $13d + 6$	M1	
		A1	

4		P1	Any one correct entry, allow unsimplified
		A1	All 3 entries correct and simplified
5	Square $4(n + 2) = 4n + 8$ Triangle $2n - 3 + n + 9 + n + 2 = 4n + 8$	P1	Correct expression for square and triangle
		C1	Complete the proof. Needs clear statement that the two expressions are equal oe
6		P1	Any one correct entry, allow unsimplified
		A1	All 3 entries correct and simplified
7	$T = \frac{B}{5}$ oe	B1	
8	attempts to subtract the 3 given sides from the perimeter $2x - 3y$	M1	ignore any missing brackets
		A1	
9	'x - 3' seen and/or attempts $2 \times x + 2$ ('x - 3') or $x + x + 'x - 3' + x - 3'$ $p = 4x - 6$	M1	Seen or implied
		A1	
10	'5p + 2(p - 2)' or equivalent seen $7p - 4$	M1	
		A1	

Calculator			
Q	Answer	Mark	Comment
11a	$15f$	B1	cao
11b	$3x$	B1	cao
12	$3 \times 6.4 = 19.2$ (cm)	B1	cao
13	$800 - 73 \times 6 (= 800 - 438)$ 362	M1	
		A1	
14	correct substitution $\frac{22.4 - 13.9}{25}$ 0.34 (m/s ²)	M1	
		A1	

Non-calculator			
Question	Topic	Step	Marks
1a	Use function machines to create expressions.	3rd	1
1b	Construct functions to describe mappings (completing a number machine).	4th	1
1c	Construct functions to describe mappings (completing a number machine).	5th	1
1d	Construct functions to describe mappings (completing a number machine).	5th	1
2a	Simplify simple linear algebraic expressions by collecting like terms.	4th	1
2b	Simplify simple linear algebraic expressions by collecting like terms.	4th	2
3a	Begin to multiply a single positive term over a bracket containing linear terms.	4th	1
3b	Simplify after multiplying a single term over a bracket.	6th	2
4	Use arithmetic operations with algebra.	4th	2
5	Simplify simple linear algebraic expressions by collecting like terms.	5th	2
6	Use arithmetic operations with algebra	4th	2
7	Construct simple formulae.	5th	1
8	Use arithmetic operations with algebra.	5th	2
9	Construct simple formulae.	5th	2
10	Construct expressions from worded descriptions, using all four basic operations.	5th	2

 Calculator			
Question	Topic	Step	Marks
11a	Simplify expressions involving multiplication and division.	3rd	1
11b	Simplify expressions involving multiplication and division.	3rd	1
12	Substitute positive integers into simple formulae expressed in letter symbols.	4th	1
13	Substitute positive integers into simple formulae expressed in letter symbols.	4th	2
14	Substitute integers into more complex formulae expressed in letter symbols.	4th	2

Marks to Steps conversion table

The table below converts marks to a step on the Pearson progression scale. For more information on Progress & Assess please see the [progression website](#).

Mark boundary	Step
0	U
1	1st
2–5	2nd
6–11	3rd
12–18	4th
19–23	5th
24–30	6th